

What is claimed is:

1. A movable vacuum forming apparatus comprising:

a pair of frames provided to respectively of upper and lower press plates of a press apparatus via seals for surrounding a predetermined space;

an interpenetrated portion provided at one of the frames and capable of being interpenetrated into other of the frames movably in an up and down direction;

a seal apparatus for slidably sealing an interval between the interpenetrated portion and the other of the frames; and

a sucking apparatus for bringing a space surrounded by the interpenetrated portion and the other of the frames under a negative pressure,

wherein the seal apparatus seals the interval by compensating for a strain of the interpenetrated portion caused by the negative pressure of the space.

2. The movable vacuum forming apparatus according to Claim 1, wherein;

the seal apparatus is a packing mounted to the interpenetrated portion for being brought into sliding contact with an inner periphery of the other of the frames and includes a lip having a size in correspondence with the strain of the interpenetrated portion.

3. The movable vacuum forming apparatus according to Claim 1, wherein;

the seal apparatus is a packing mounted to the other of the frames

and brought into sliding contact with an outer periphery of the interpenetrated portion and includes a lip having a size in correspondence with the strain of the interpenetrated portion.

4. The movable vacuum forming apparatus according to Claim 1,  
5 further comprising a connecting piece for connecting the pair of frames movably in the up and down direction by a predetermined length to thereby integrate the pair of frames.

5. The movable vacuum forming apparatus according to Claim 1, wherein;

10 the other of the frames provided with the interpenetrated portion includes an uninterpenetrated portion which is not interpenetrated into the one of the frames and the suction apparatus vacuums the surrounded space via the uninterpenetrated portion.

6. The movable vacuum forming apparatus according to Claim 1,  
15 further comprising:

a hole provided at the one of the frames and connected to the suction apparatus;

a first notched groove formed at an upper face of the one of the frames and communicated with the hole; and

20 a second notched groove formed at an upper face of the interpenetrated portion and communicated with the first notched groove,

wherein the suction apparatus vacuums the surrounded space via the first notched groove and the second notched groove.

7. A movable vacuum forming apparatus comprising:  
25 one frame provided between upper and lower press plates of a press

apparatus for surrounding a predetermined space provided at the upper  
press plate via a seal;

a base provided at the lower press plate via a seal and having an  
interpenetrated portion capable of being interpenetrated to the one frame  
5 movably in an up and down direction;

a seal apparatus for slidably sealing an interval between the  
interpenetrated portion of the base and the one frame; and

a suction apparatus for bringing a space formed by the  
interpenetrated portion and the one frame and the upper and the lower  
10 press plates under a negative pressure.

8. The movable vacuum forming apparatus according to Claim 7,  
wherein;

the base includes a pressure balance hole for communicating the  
surrounded space and the space formed between the base and the lower  
15 press plate.

9. A vacuum press apparatus comprising:

upper and lower press plates moved in an up and down direction by  
a predetermined drive apparatus;

one frame attachably and detachably provided between the upper  
20 and the lower press plates for surrounding a predetermined space provided  
at one of the upper and the lower press plates via a seal;

a member provided between the upper and the lower press plates,  
provided at other of the upper and the lower press plates via a seal and  
having an interpenetrated portion capable of being interpenetrated to the  
25 one frame movably in the up and down direction; and

a seal apparatus for slidably sealing an interval between the interpenetrated portion of the member and the one frame; and

a suction apparatus for bringing a space surrounded by the interpenetrated portion and the one frame under a negative pressure.

5           10. The vacuum press apparatus according to Claim 9, wherein the member is a frame.

          11. The vacuum press apparatus according to Claim 9, wherein the member is a base.

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